



# SAM Merchant Plant Financial Model

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2021 SAM Webinars  
August 4<sup>th</sup>, 2021

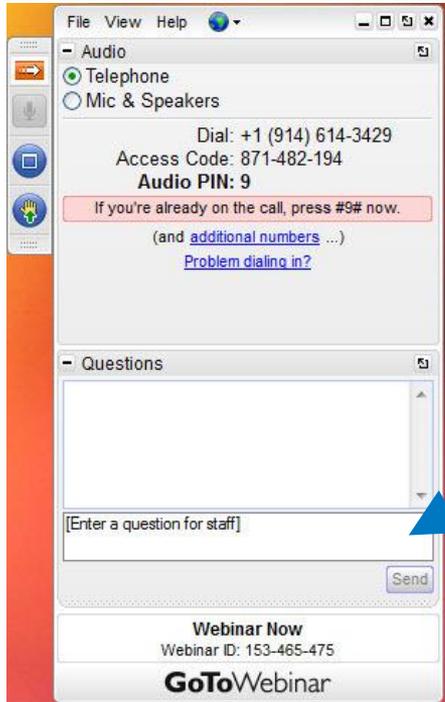
# SAM Webinars for 2021

Merchant Plant Financial Model	August 4
Marine Energy Performance Models	August 18
New Battery Model Features	September 1
New Community Solar Financial Model	September 15
Electricity Bill Calculator Updates	September 29

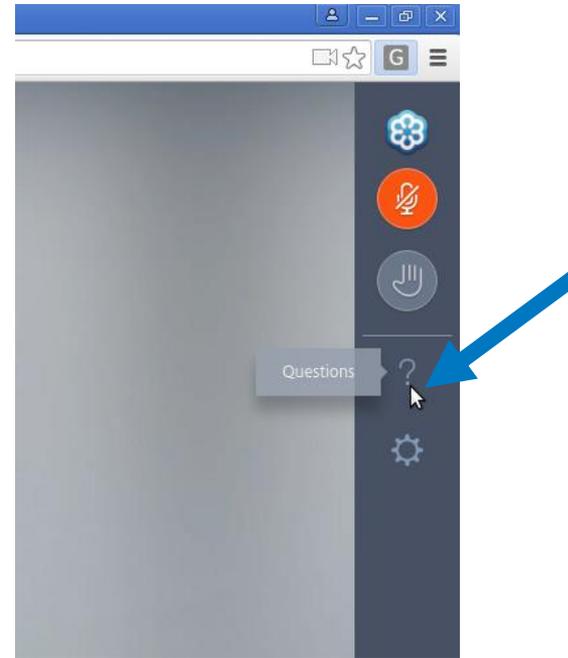
Register for free at: <https://sam.nrel.gov/events.html>

*Find webinar recordings at <https://sam.nrel.gov/>*

# Questions and Answers



Desktop application



Instant Join Viewer

We will either type an answer to your question or answer it at the end of the presentation.

# Outline

- 1** What is SAM?
- 2** Merchant Plant Review
- 3** Cambium Data Viewer Overview
- 4** SAM Merchant Plant Walkthrough
- 5** Discussion of Results
- 6** Questions and Answers

# What is SAM?

## The System Advisor Model

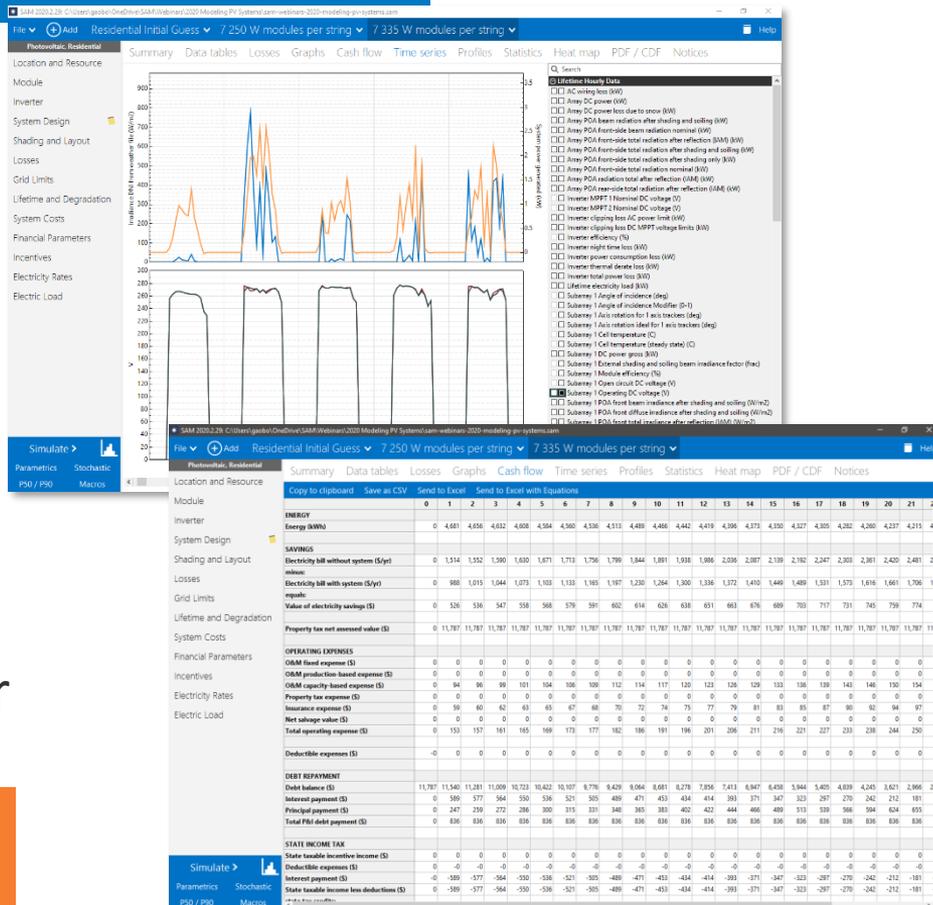
Free computer software developed and distributed by the U.S. Department of Energy's National Renewable Energy Laboratory

Calculates:

- A power system's energy output over one year
- A power project's cash flow over years of operation

“Introduction to SAM 2020.2.29”

<https://sam.nrel.gov>



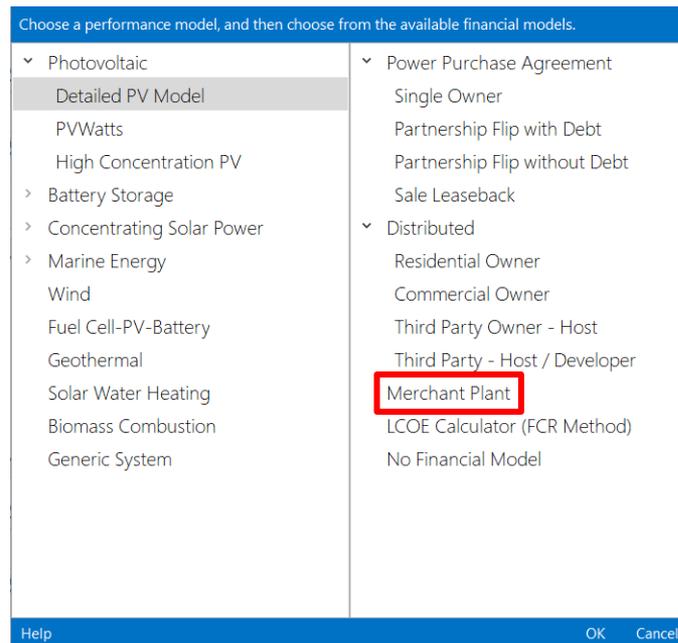
# What is SAM? – Financial Models

## SAM's Financial Models

- Residential & Commercial
- Power Purchase Agreement (PPA)
- Third Party Ownership
- \*Merchant Plant
- \*Community Solar

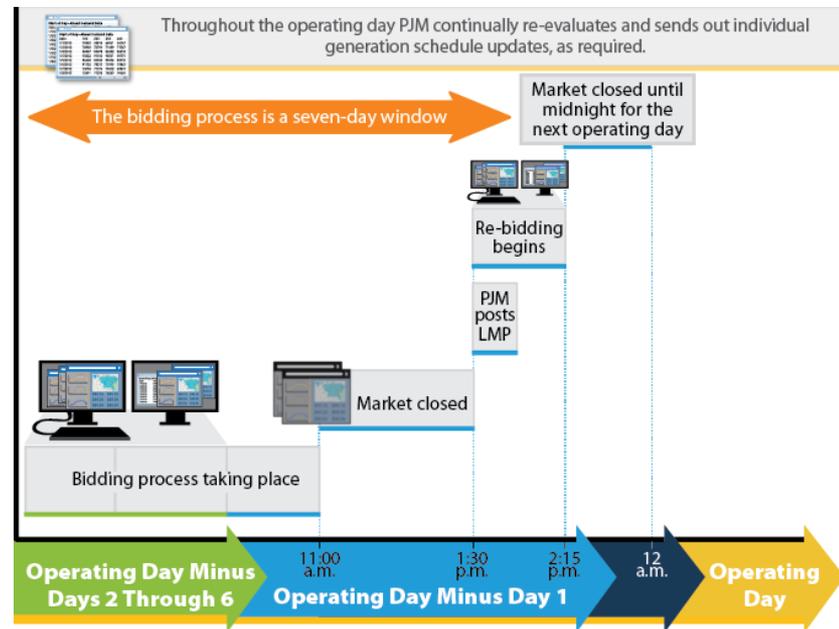
\* Part of this webinar series

<https://sam.nrel.gov/forum/>



# Merchant Plants

- No Power Purchase Agreement (PPA)
  - No long term contract
- Revenue from spot market
  - Competitive bidding process



<https://learn.pjm.com/three-priorities/buying-and-selling-energy/energy-markets>

# What is the Cambium Data Viewer?

- Collection from ReEDS, dGen, PLEXOS, and Cambium
- Hourly marginal cost data
  - Cost scenarios
  - Location
  - Forecast year



Full documentation available:  
<https://cambium.nrel.gov>

# SAM Merchant Plant Walkthrough and Example

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SAM Demo

# Cambium Dynamic Year Visual

Hypothetical: 7-year analysis, starting from 2020

Ideal Forecast Range	Available in Cambium	Resulting Modification in SAM
2020	2020	2020
2021		2020
2022	2022	2022
2023		2022
2024	2024	2024
2025		2024
2026	2026	2026

# Thank you!

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[www.nrel.gov](http://www.nrel.gov)

